ACC.15
TCT@ACC-i2 | innovation in intervention

A1284
JACC March 17, 2015
Volume 65, Issue 10S

Non Invasive Imaging (Echocardiography, Nuclear, PET, MR and CT)

WHICH IS WORSE FOR THE OCCURRENCE OF MAJOR CARDIAC EVENTS, HIGH SYNTAX SCORE OR HIGH SUMMED DEFECT SCORE?

Poster Contributions
Poster Hall B1
Sunday, March 15, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Non Invasive Imaging: Advances in Nuclear Imaging
Abstract Category: 19. Non Invasive Imaging: Nuclear
Presentation Number: 1208-047

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Background: SYNTAX score derived from coronary angiography (CAG) has been well employed to assess anatomical severity of coronary artery disease (CAD) since the report of SYNTAX trial. However risk stratification of major cardiac events (MCE) by means of combination of SYNTAX score and nuclear cardiology has not been evaluated.

Methods: 412 patients with CAD who had greater than 75% stenosis of coronary artery by CAG and with greater than 5% ischemic myocardium in rest 201Tl/stress 99mTc-tetrofosmin single photon emission computed tomography (SPECT) were reevaluated after the revascularization. All patients were followed up for the occurrence of MCE. SYNTAX scores were calculated using the original calculator, and summed stress scores (SSS) were calculated using a 20-segment 5-point scoring model.

Results: During the follow-up period (mean 32.6 ± 16.4 months), cardiac death (n=11) nonfatal MI (n=1), and UAP (n=25) occurred in 412 patients (9.0%). SYNTAX scores were significantly larger in patients with than without MCE. MCE rates were divided four groups by means of combination of the best cut-off values, i.e. 13 for the SYNTAX scores and 9 for the SSS before treatment (Figure). Annual MCE rates with SYNTAX scores ≥ 13 and SSS < 9 (N = 29: 5.8%) had significantly higher than SYNTAX scores < 13 and SSS ≥ 9 (N= 142: 2.1%, $p<0.05$).

Conclusion: MCE risk with high SYNTAX scores are worse than with high SSS. Combination of SYNTAX score and nuclear variables are useful for risk stratification of MCE in patients with CAD.